

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

BIOMÉRIEUX, S.A., BIOMÉRIEUX, INC.,

Plaintiffs,

V.

C.A. No. 18-21-LPS-CJB

HOLOGIC, INC., GRIFOLS, S.A., GRIFOLS
DIAGNOSTIC SOLUTIONS INC.,

Defendants.

FINAL JURY INSTRUCTIONS

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1. GENERAL INSTRUCTIONS

1.1 INTRODUCTION

Members of the jury, now it is time for me to instruct you about the law that you must follow in deciding this case. Each of you has been provided a copy of these instructions. You may read along as I deliver them if you prefer.

I will start by explaining your duties and the general rules that apply in every civil case.

Then I will explain some rules that you must use in evaluating particular testimony and evidence.

Then I will explain the positions of the parties and the law you will apply in this case.

Finally, I will explain the rules that you must follow during your deliberations in the jury room, and the possible verdicts you may return.

Please listen very carefully to everything I say.

You will have a written copy of these instructions with you in the jury room for your reference during your deliberations. You will also have a verdict form, which will list the questions that you must answer to decide this case. I will provide you a copy of the verdict sheet after you hear the parties' closing arguments.

1.2 JURORS' DUTIES

You have two main duties as jurors. The first one is to decide what the facts are from the evidence that you saw and heard here in court. Deciding what the facts are is your job, not mine, and nothing that I have said or done during this trial was meant to influence your decision about the facts in any way. You are the sole judges of the facts. Do not guess or speculate, and do not be influenced in any way by any personal feeling of sympathy for, or prejudice against, either side in this case.

Your second duty is to take the law that I give you, apply it to the facts, and decide, under the appropriate burden of proof, which party should prevail on each of the issues presented. It is my job to instruct you about the law, and you are bound by the oath that you took at the beginning of the trial to follow the instructions that I give you, even if you personally disagree with them. This includes the instructions that I gave you before and during the trial, and these instructions. All of the instructions are important, and you should consider them together as a whole.

Perform these duties fairly. Do not let any bias, sympathy, or prejudice that you may feel toward one side or the other influence your decision in any way.

1.3 BURDENS OF PROOF

In any legal action, facts must be proven by a required standard of evidence, known as the “burden of proof.”

In this case, the Plaintiffs contend that they are entitled to damages related to infringement of the '352 patent, in the form of a reasonable royalty. A party asserting patent infringement has the burden of proving damages by a preponderance of the evidence. That means that the party has to produce evidence that, when considered in light of all of the facts, leads you to believe that what that party claims is more likely true than not. To put it differently, if you were to put the parties' evidence on opposite sides of a scale, the evidence supporting the claims of the party seeking damages for infringement must make the scales tip somewhat on its side.

Defendants contend that the Asserted Claims of the Patent-in-Suit are invalid. A party challenging the validity of a patent has the burden of proving by clear and convincing evidence that the patent is invalid. Clear and convincing evidence is evidence that produces an abiding conviction that the truth of a factual contention is highly probable. Proof by clear and convincing evidence is, thus, a higher burden than proof by a preponderance of the evidence.

Those of you familiar with criminal cases will have heard of “proof beyond a reasonable doubt.” That burden is higher than a preponderance of the evidence and does not apply in a civil case like this one. Therefore, you should put it out of your mind in considering whether or not either party here has met its burden of proof.

1.4 EVIDENCE DEFINED

You must make your decision based only on the evidence that you saw and heard here in court. Do not let rumors, suspicions, or anything else that you may have seen or heard outside of court influence your decision in any way.

The evidence in this case includes only what the witnesses said while they were testifying under oath (including previous deposition or trial testimony that has been played by video or read to you), the exhibits that I allowed into evidence, and the stipulations to which the lawyers agreed.

Certain charts and graphics have been used to illustrate testimony from witnesses. Unless I have specifically admitted them into evidence, these charts and graphics are not themselves evidence, even if they refer to, identify, or summarize evidence, and so you will not have these demonstratives in the jury room. Instead, the testimony the witnesses gave while these exhibits were being displayed is the evidence.

Nothing other than what I have just listed is evidence. The lawyers' statements and arguments are not evidence. The arguments of the lawyers are offered solely as an aid to help you in your determination of the facts. Their questions and objections are not evidence. My legal rulings are not evidence. You should not be influenced by a lawyer's objection or by my ruling on that objection. Any of my comments and questions are not evidence.

During the trial I may have not let you hear the answers to some of the questions that the lawyers asked. I also may have ruled that you could not see some of the exhibits that the lawyers wanted you to see. And, sometimes I may have ordered you to disregard things that you saw or heard, or that I struck from the record. You must completely ignore all of these things. Do not speculate about what a witness might have said or what an exhibit might have

shown. These things are not evidence, and you are bound by your oath not to let them influence your decision in any way.

You must not conduct any independent research, investigation, or experiments about the case or its subject matter on your own. You may not use any electronic device or any internet service to conduct any research about this case. Make your decision based only on the evidence, as I have defined it here, and nothing else.

1.5 DIRECT AND CIRCUMSTANTIAL EVIDENCE

In this trial, the parties have presented two kinds of evidence: “direct evidence” and “circumstantial evidence.”

Direct evidence is simply evidence like the testimony of an eyewitness which, if you believe it, directly proves a fact. For example, if a witness testified that she saw it raining outside, and you believed her, that would be direct evidence that it was raining.

Circumstantial evidence is a chain of circumstances that indirectly proves a fact. For example, if someone walked into the courtroom wearing a raincoat covered with drops of water and carrying a wet umbrella, that would be circumstantial evidence from which you could conclude that it was raining.

It is your job to decide how much weight to give the direct and circumstantial evidence. The law makes no distinction between the weight that you should give to either direct or circumstantial evidence, nor does it say that one type of evidence is any better evidence than the other. You should consider all of the evidence, both direct and circumstantial, and give it whatever weight you believe it deserves.

1.6 CONSIDERATION OF EVIDENCE

You should use your common sense in weighing the evidence. Consider it in light of your everyday experience with people and events, and give it whatever weight you believe it deserves. If your experience tells you that certain evidence reasonably leads to a conclusion, you are free to reach that conclusion.

1.7 STATEMENTS OF COUNSEL

A further word about statements of counsel and arguments of counsel. The attorneys' statements and arguments are not evidence. Instead, their statements and arguments are intended to help you review the evidence presented. If you remember the evidence differently from the attorneys, you should rely on your own recollection.

1.8 CREDIBILITY OF WITNESSES

You are the sole judges of each witness's credibility. You may believe everything a witness says, or part of it, or none of it. You should consider each witness's means of knowledge; strength of memory; opportunity to observe; how reasonable or unreasonable the testimony is; whether it is consistent or inconsistent; whether it has been contradicted; the witness's biases, prejudices, or interests; the witnesses' manner or demeanor on the witness stand; and all circumstances that, according to the evidence, could affect the credibility of the testimony.

In determining the weight to give to the testimony of a witness, you should ask yourself whether there was evidence tending to prove that the witness testified falsely about some important fact, or whether there was evidence that at some other time (including in prior testimony read to you or played by video for you at trial) the witness said or did something, or failed to say or do something, that was different from the testimony the witness gave at the trial. You have the right to distrust such a witness's testimony in other particulars and you may reject some or all of the testimony of that witness or give it such credibility as you think it deserves. You should remember that a simple mistake by a witness does not necessarily mean that the witness was not telling the truth. People may tend to forget some things or remember other things inaccurately. If a witness has made a misstatement, you should consider whether it was simply an innocent lapse of memory or an intentional falsehood, and that may depend on whether it concerns an important fact or an unimportant detail.

1.9 NUMBER OF WITNESSES

One more point about the witnesses. Sometimes jurors wonder if the number of witnesses who testified makes any difference. Do not make any decisions based only on the number of witnesses who testified. What is more important is how believable the witnesses were, and how much weight you think their testimony deserves. Concentrate on that, not the numbers.

It is not required in a patent case for any party to call current or former employees as their witnesses. But any party may ask you to draw inferences based on who does, or does not, testify.

1.10 DEPOSITION TESTIMONY

A deposition is the sworn testimony of a witness taken before trial. The witness is placed under oath and swears to tell the truth, and lawyers for each party may ask questions. A court reporter is present and records the questions and answers. The deposition may also be recorded on videotape.

During the trial, certain testimony was presented to you through depositions that were electronically played or read into the record. You should not attribute any significance to the fact that the deposition is played by video or read by other people. This testimony may have been edited or cut to exclude irrelevant testimony. You should not attribute any significance to the fact that the videos or the read excerpts may appear to have been edited. This testimony must be given the same consideration you would give it had the witness personally appeared in court. Like the testimony of a live witness, the statements made in a deposition are made under oath and are considered evidence that may be used to prove particular facts.

1.11 EXPERT WITNESSES

Expert testimony is testimony from a person who has a special skill or knowledge in some science, profession, or business. This skill or knowledge is not common to the average person but has been acquired by the expert through special study or experience. The expert witnesses who have testified on behalf of bioMérieux in this case were Dr. Thomas Gingeras and Ms. Catharine Lawton. The expert witnesses for the Defendants were Dr. Garth Ehrlich, Dr. Warner Greene, and Mr. John Bone.

In weighing expert testimony, you may consider the expert's qualifications, the reasons for the expert's opinions, and the reliability of the information supporting the expert's opinions, as well as the factors I have previously mentioned for weighing the testimony of any other witness. Expert testimony should receive whatever weight and credit you think appropriate, given all the other evidence in the case. You are free to accept or reject the testimony of experts, just as with any other witness.

1.12 DEMONSTRATIVE EXHIBITS

During the course of the trial, you have seen many exhibits. Many of these exhibits were admitted as evidence. Some of these exhibits constitute charts and summaries. You may use these charts and summaries as evidence, even though the underlying documents and records are not here. You should give them only such weight as you think they deserve. You will have these admitted exhibits in the jury room for your deliberations.

The remainder of the exhibits (including charts, PowerPoint presentations, and animations) were offered to help illustrate the testimony of the various witnesses. These illustrative exhibits, called “demonstrative exhibits,” have not been admitted, are not evidence, and should not be considered as evidence. Rather, it is the underlying testimony of the witness that you heard when you saw the demonstrative exhibits that is the evidence in this case.

1.13 USE OF NOTES

You may use notes taken during trial to assist your memory. However, you should use caution in consulting your notes. There is always a tendency to attach undue importance to matters that you have written down. Some testimony that is considered unimportant at the time presented, and thus not written down, takes on greater importance later on in the trial in light of all the evidence presented. Therefore, your notes are only a tool to aid your own individual memory, and you should not compare notes with other jurors in determining the content of any testimony or in evaluating the importance of any evidence. Your notes are not evidence, and are by no means a complete outline of the proceedings or a list of the highlights of the trial. Above all, your memory should be your greatest asset when it comes time to deliberate and render a decision in this case.

1.14 STIPULATIONS

The parties have stipulated that certain facts are true, and some of those stipulations have been read to you during this trial. You must treat those facts as having been proven for the purposes of this case.

2. THE PARTIES AND THEIR CONTENTIONS

2.1 THE PARTIES

I will now review for you the parties to this action and the positions of the parties that you will have to consider in reaching your verdict.

The Plaintiffs in this case are bioMérieux, S.A. and bioMérieux, Inc., which the parties have referred to and I will refer to from now on as “bioMérieux.”

The Defendants in this case are Hologic, Inc., which I will refer to from now on as “Hologic,” and Grifols S.A. and Grifols Diagnostics Solutions Inc., which I will refer to from now on as “Grifols.” I will refer to Hologic and Grifols collectively as “the Defendants.”

2.2 SUMMARY OF PATENT-IN-SUIT

There is one patent for your consideration in this case: U.S. patent number 8,697,352, which I may refer to as “the ’352 patent” or the “patent-in-suit.” During the trial, the parties offered testimony and evidence to familiarize you with the technology involved in the ’352 patent.

2.3 SUMMARY OF CONTENTIONS

bioMérieux alleges that the Defendants have infringed the following claims of the '352 patent by making, using, selling, or offering for sale certain products in violation of bioMérieux's patent rights: claims 1-6 of the '352 patent. I will refer to these claims collectively as the "Asserted Claims." bioMérieux seeks damages, or monetary compensation, for infringement by the Defendants.

The Defendants deny all of bioMérieux's assertions, and allege that the Asserted Claims of the '352 patent are invalid.

It has already been found: (1) that Defendants infringe these claims, and (2) that Defendants invented these claims prior to Plaintiffs, although Plaintiffs contend that Defendants later abandoned, concealed, and/or suppressed their prior invention.

I will now summarize the issues that you must decide and for which I will provide instructions to guide your deliberations. (The specific questions you must answer are listed on the verdict sheet you will be given.) You must decide the following main issues:

- Whether the Defendants have proven by clear and convincing evidence that one or more of the Asserted Claims are invalid;
- If you find any of the Asserted Claims are valid, the amount of damages bioMérieux has proven by a preponderance of the evidence it should be awarded as compensation for the Defendants' infringement.

3. PATENT CLAIMS

3.1 PATENT LAWS

At the beginning of the trial, I gave you some general information about patents and the patent system and a brief overview of the patent laws relevant to this case. I will now give you more detailed instructions about the patent laws that specifically relate to this case.

3.2 PATENT CLAIMS GENERALLY

Throughout the trial, and in my instructions, you have heard much about patent “claims” and the “Asserted Claims.” The patent claims are the numbered paragraphs at the end of a patent. The claims are important because the words of the claims define what a patent covers. Only the claims of a patent can be infringed. The claims are intended to define, in words, the bounds of the purported invention. Each of the Asserted Claims must be considered individually.

The inventions that are claimed and protected by patents may be for products, compositions, or methods for doing something, or for using or making a product or composition.

3.3 CLAIM CONSTRUCTION IN THIS CASE

It is the Court's duty under the law to define the meaning of any claim language that must be interpreted. As I instructed you at the beginning of the case, I have made my determinations, and I will now instruct you on the meaning of certain claim terms. For the patent claim that I identify, you must apply the meaning I give when deciding whether any claim has been infringed. You must ignore any different definitions used by the witnesses, including expert witnesses, or the attorneys.

You are advised that the following definition for the following terms or groups of terms must be applied:

The claim term "HIV-1 genome" as used in claims 1, 3, and 5 of the '352 patent means "the genetic sequence of an HIV-1 strain."

The claim term "HIV-1 nucleic acid" as used in claims 1, 3, and 5 of the '352 patent means "nucleic acid derived from the genetic sequence of an HIV-1 strain."

The claim term "fully complementary to a sequence of the LTR region" as used in claims 1-6 of the '352 patent means "fully complementary to a sequence of the LTR region of an HIV-1 strain."

The claim term "fully complementary to a sequence which is the reverse complement of a sequence of the LTR region" as used in claims 1-6 of the '352 patent means "fully complementary to a sequence which is the reverse complement of a sequence of the LTR region of an HIV-1 strain."

The claim term "primer binding site" as used in claims 1, 3, and 5 of the '352 patent means "A location of the HIV-1 genome, or the sequence complementary thereto, to which an oligonucleotide can anneal."

In addition to the constructions I just read, I further instruct you that the fact that a product contains primers targeted to regions of the HIV genome besides the LTR region does not prevent the product from “consisting of a first primer and a second primer” as used in claims 1, 3, and 5 of the ’352 patent.

For any words in the claims for which I have not provided you with a definition, you should apply the plain and ordinary meaning to one of ordinary skill in the art at the time of the invention.

3.4 INDEPENDENT AND DEPENDENT CLAIMS

There are two different types of claims in the patent. The first type is called an “independent claim.” An independent claim does not refer to any other claim of the patent. An independent claim is read separately to determine its scope.

The other type of claim is called a “dependent claim.” A dependent claim refers to and depends upon at least one other claim in the patent and thus incorporates whatever that other claim says. Accordingly, to determine what a dependent claim covers, you must read both the dependent claim and the claim or claims to which it refers.

In this case, asserted claims 1, 3, and 5 of the '352 patent are independent claims. Claims 2, 4, and 6 are dependent claims and depend on claims 1, 3, and 5, respectively.

4. INVENTION

4.1 DATE OF INVENTION

The date of invention is presumed to be the filing date of the patent application, but the patent owner is entitled to prove that the date of invention is actually earlier.

In this case, bioMérieux contends that the inventions claimed in the '352 patent were invented on June 23, 1997, before its first patent application was initially filed on August 8, 1997. Defendants contend that the '352 patent is only entitled to the filing date of August 8, 1997. For bioMérieux to be entitled to the earlier invention date of June 23, 1997, it must prove, by a preponderance of the evidence, on a claim-by-claim basis, that the invention was conceived by this date and thereafter the inventors were diligent in reducing the invention to practice. I will now define for you what is meant by “conception” and “reduction to practice.”

4.2 CONCEPTION

“Conception” means the formation in the mind of an inventor of a definite and permanent idea of the complete and operative invention, such that, if the idea were communicated to a person of ordinary skill in the art, he or she would be able to make the invention without undue research or experimentation or the exercise of inventive skill. This requirement does not mean that the inventor has to have a prototype built, or have actually explained the invention to another person. But, there must be some evidence beyond the inventor’s own testimony that confirms the date on which the inventor had the complete and operative idea. In other words, the testimony of an inventor is not sufficient, standing alone, to prove a conception date. An inventor must provide independent, corroborating evidence in addition to his or her own oral testimony. Conception may be proven when the invention is shown in its complete form by drawings, disclosure to another person, or other forms of evidence presented at trial. Conception must include every feature or limitation of the claimed invention.

4.3 REDUCTION TO PRACTICE

“Reduction to practice” means an invention is sufficiently developed to show that it would work for its intended purpose. An inventor can show he was diligent in reducing an invention to practice if he engaged in reasonably continuous activity to reduce the invention to practice. As with proof of the conception date, there must be corroborating evidence in addition to the inventor’s testimony that shows diligence.

5. INVALIDITY DEFENSES

Patent invalidity is a defense to patent infringement. I will now instruct you on the rules you must follow in deciding whether or not Defendants have proven that any asserted claim is invalid.

Patents are issued by the United States Patent and Trademark Office after a process known as “examination,” where the Office considers an application and arguments from the applicant as to why the patent should issue. The law presumes that the Patent Office acted correctly in issuing the patent—that is, the law presumes that claims are valid. In order to overcome this presumption, the Defendants must persuade you by clear and convincing evidence that each of the Asserted Claims they are challenging are not valid.

You must evaluate the invalidity of each asserted claim separately. Even if an independent claim is invalid, this does not mean that the dependent claims that depend from it are automatically invalid. However, if you find that a dependent claim is invalid, then you must find that the independent claim from which it depends is also invalid. This is because the dependent claim includes all of the elements of the independent claim from which it depends.

Defendants contend that the asserted claims are invalid for the following reasons: because they are anticipated by the prior art, and/or would have been obvious to one of ordinary skill in the art at the time of invention.

I will now instruct you in more detail on Defendants’ invalidity defenses and the legal standards you must apply to evaluate them.

6. PRIOR ART

6.1 PRIOR ART DEFINED

Prior art is the legal term used to describe what others had done in the field before the invention was made.

For the asserted claims, prior art includes any of the following items received into evidence during trial:

1. any product or method of using a product that was publicly known or used by others in the United States before the patented invention was made;
2. any product or method of using a product that was in public use or on sale in the United States more than one year before the patent was filed;
3. patents that issued more than one year before the filing date of the patent, or before the invention was made;
4. publications having a date more than one year before the filing date of the patent, or before the invention was made; and
5. any product or method of using a product that was made by another inventor in the United States before the patented invention was made by the named inventors where the prior invention was not abandoned, suppressed, or concealed.

6.2 PERSON OF ORDINARY SKILL IN THE ART

The question of invalidity of a patent claim is determined from the perspective of a person of ordinary skill in the art, in the field of the asserted invention, as of the effective filing date of the respective patent.

In order to determine the obviousness of the invention, you must determine the level of ordinary skill in the field of the invention. You must consider and assess this factor before reaching your conclusion in this case.

7. ANTICIPATION

7.1 ANTICIPATION GENERALLY

In order for someone to be entitled to a patent, the claimed invention must be new relative to what was known in the prior art. If the claimed invention is not new relative to the prior art, we say that it was “anticipated” by the prior art. A claim that is “anticipated” is not entitled to patent protection and therefore invalid. As with all of their defenses that challenge the validity of the Asserted Claims, Defendants must prove anticipation by clear and convincing evidence and on a claim-by-claim basis.

7.2 ANTICIPATION BY PRIOR INVENTION

A patent claim is invalid if the invention defined by the claims of the patent was invented by another person in the United States before the named inventor of the patent claims, and that person did not abandon, suppress, or conceal the invention.

In this case, Defendants contend that primers developed by Gen-Probe, Inc. in September 1995 and January 1997 are prior art and, thus, anticipate the invention disclosed in the Asserted Claims of the '352 patent. It has already been established that Defendants were the first to invent the claimed invention of Plaintiffs' '352 patent. Defendants' anticipation defense requires Defendants to prove by clear and convincing evidence that they did not abandon, suppress, or conceal their prior invention.

If Defendants prove by clear and convincing evidence that they did not abandon, suppress, or conceal their prior invention, then their prior invention anticipates (and therefore invalidates) the '352 patent. Alternatively, if Defendants did abandon, suppress, or conceal their prior invention, then their prior invention does not anticipate (and therefore does not invalidate) the '352 patent.

Abandonment, suppression, and concealment come in two forms: (1) intentional abandonment, suppression, or concealment; and (2) abandonment, suppression, or concealment that is inferred from an unreasonable delay in making a public disclosure of the invention.

A prior inventor may choose one of several paths to publicly disclose her invention. Two ways of proving an invention has been disclosed to the public are (1) commercializing a product, and (2) filing a patent application. In this case, Defendants can meet their burden to prove that they did not abandon, suppress, or conceal their invention by proving they commercialized a

product and/or by proving they filed a patent application. Defendants can meet their burden by proving either of these ways of publicly disclosing their invention.

In order for you to find that Defendants have met their burden with respect to the commercialization path – that is, in order for you to find that Defendants publicly disclosed their invention through commercialization and, therefore, did not abandon, suppress, or conceal their invention – Defendants must persuade you, by clear and convincing evidence, that a timely public disclosure of their invention occurred by bringing the invention to market. Generally, a prior invention was not abandoned, suppressed, or concealed if the invention was made public, sold, or offered for sale, or otherwise used for a commercial purpose. A period of delay does not constitute abandonment, suppression, or concealment, provided the prior inventor was engaged in reasonable efforts to bring the prior invention to market during this period. When a prior inventor argues she disclosed her invention by commercialization, the central inquiry is whether the prior inventor engaged in reasonable efforts (including active and continuous steps towards the commercialization of the invention) to bring the invention to market.

In order for you to find that Defendants have met their burden with respect to the patent application path – that is, in order for you to find that Defendants publicly disclosed their invention through filing a patent application and, therefore, did not abandon, suppress, or conceal their invention – Defendants must persuade you, by clear and convincing evidence, that a timely public disclosure of their invention occurred by their filing of a patent application claiming their invention. A prior inventor is not required to use the patent system, and is not penalized if she chooses not to file a patent application, so long as her invention is brought to the public by some other means.

In assessing whether Defendants have met their burden, you may consider any of the following factors. This list is not exhaustive and no one factor is dispositive. You can and should consider all of the evidence presented.

- Whether Defendants were “spurred” into commercializing their product and/or “spurred” into filing a patent application by learning of the commercial activity or patent application of another.
- The amount of time Defendants waited between inventing the HIV-1 LTR primers claimed in Plaintiffs’ ’352 patent and when Defendants commercialized their product and/or filed their patent application. No particular length of delay is necessarily unreasonable. The law permits an inventor some time to develop, improve, and then disclose her invention.
- When the public enjoyed the benefits or use of the prior invention.
- What portion, if any, of the time Defendants took to commercialize and/or file a patent application – after they invented the HIV-1 LTR primers later claimed in Plaintiffs’ ’352 patent – Defendants used to develop other features of a product or other portions of their patent claims that are broader than and in addition to what is specifically claimed in Plaintiffs’ ’352 patent.
- Whether the relevant public could have reverse-engineered the Accused Products to determine the sequence of the Gen-Probe LTR primers.

In this case, Defendants were not required to disclose the specific sequences of their HIV-1 LTR primers in order to be found to have publicly disclosed their invention and to be found not to have abandoned, suppressed, or concealed their invention. However, in determining whether Defendants have met their burden, you may find relevant any evidence you heard as to

whether, when, and why (or why not) Defendants did (or did not) disclose their specific sequences.

Further, I instruct you that with respect to Defendants' anticipation defense, your verdict must be the same for all six of the Asserted Claims. That is, you must find either that all of the Asserted Claims are invalid due to anticipation by prior invention (because Defendants have met their burden to prove that they did not abandon, suppress, or conceal their prior invention) or you must find that all of the Asserted Claims are not invalid due to anticipation by prior invention (because Defendants have not met their burden to prove that they did not abandon, suppress, or conceal their prior invention). In other words, on the verdict sheet you will either answer "Yes" for all questions about anticipation or you will answer "No" for all questions about anticipation.

8. OBVIOUSNESS

8.1 OBVIOUSNESS GENERALLY

A claimed invention is invalid as “obvious” if it would have been obvious to the person of ordinary skill in the art at the time the invention was made. Unlike anticipation, which allows consideration of only one item of prior art, obviousness may be shown by considering one or more than one item of prior art.

In deciding obviousness, you must avoid using hindsight; that is, you should not consider what is known today or what was learned from the teachings of the ’352 patent. You cannot use hindsight to pick and choose among isolated disclosures in the prior art to duplicate the claimed invention. You should not use the patent as a road map for selecting and combining items of prior art. Instead, you must put yourself in the place of a person of ordinary skill in the art at the time the invention was made.

The following factors must be evaluated to determine whether the Defendants have established that the claimed invention or inventions are obvious:

1. the scope and content of the prior art relied upon by the Defendants;
2. the difference or differences, if any, between each claim of the asserted patents that the Defendants contend is obvious and the prior art;
3. the level of ordinary skill in the art at the time the invention of the asserted patents was made; and
4. additional considerations, if any, that indicate that the invention was obvious or not obvious.

Each of these factors must be evaluated, although they may be analyzed in any order, and you must perform a separate analysis for each of the claims.

The Defendants must prove by clear and convincing evidence that the invention would have been obvious. Again, you must undertake this analysis separately for each claim that the Defendants contend is obvious.

I will now explain each of the four factors you will consider in your obviousness analysis in more detail.

8.2 SCOPE AND CONTENT OF THE PRIOR ART

You must determine what is the prior art that may be considered in determining whether the asserted claims are obvious. A prior art reference may be considered if it discloses information designed to solve any problem or need addressed by the patent or if the reference discloses information that has obvious uses beyond its main purpose that a person of ordinary skill in the art would reasonably examine to solve any problem or need addressed by the patent.

8.3 DIFFERENCES BETWEEN THE CLAIMED INVENTION AND THE PRIOR ART

You should analyze whether there are any relevant differences between the prior art and the claimed invention from the view of a person of ordinary skill in the art at the time of the invention. Your analysis must determine the impact, if any, of such differences on the obviousness or nonobviousness of the invention as a whole, and not merely some portion of it.

In analyzing the relevance of the differences between the claimed invention and the prior art, you do not need to look for precise teaching in the prior art directed to the subject matter of the claimed invention. You may take into account the inferences and creative steps that a person of ordinary skill in the art would have employed in reviewing the prior art at the time of the invention. For example, if the claimed invention combined elements known in the prior art and the combination yielded results that were predictable to a person of ordinary skill in the art at the time of the invention, then this evidence would make it more likely that the claim was obvious. On the other hand, if the combination of known elements yielded unexpected or unpredictable results, or if the prior art taught away from combining the known elements, then this evidence would make it more likely that the claim that successfully combined those elements was not obvious.

To the extent an art is unpredictable, potential solutions may be less likely to be genuinely predictable.

Importantly, a claim is not proved obvious merely by demonstrating that each of the elements was independently known in the prior art. Most, if not all, inventions rely on building blocks long-known, and claimed discoveries almost of necessity will likely be combinations of what is already known. Therefore, you should consider whether a reason existed at the time of the invention that would have prompted a person of ordinary skill in the art in the relevant field

to combine the teachings in the way the claimed invention does. The reason could come from the prior art, the background knowledge of one of ordinary skill in the art, the nature of any problem or need to be addressed, market demand, or common sense. You may also consider whether the problem or need was known, the possible approaches to solving the problem or addressing the need were known and finite, and the solution was predictable through use of a known option. Further you may consider whether the prior art taught away from the proposed combination, which may tend to show the proposed combination was not obvious.

If you find that a reason existed at the time of the invention to combine the elements of the prior art to arrive at the claimed invention, and there would have been a reasonable expectation of success for doing so, this evidence would make it more likely that the claimed invention was obvious. Again, you must undertake this analysis separately for each claim that Defendants contend is obvious.

8.4 LEVEL OF ORDINARY SKILL

The determination of whether a claimed invention is obvious is based on the perspective of a person of ordinary skill in the art. The person of ordinary skill is presumed to know all prior art that you have determined to be reasonably relevant. The person of ordinary skill is also a person of ordinary creativity that can use common sense to solve problems.

In this case, bioMérieux has proposed that the person of ordinary skill has the following qualifications: “An M.D. or a Ph.D. in biochemistry, virology, molecular biology, or a related field, with at least two years of post-graduate experience with nucleic acid amplification techniques, or would have had a Master’s or Bachelor’s degree in a similar field of study, with a commensurate increase in their years of post-graduate experience. The POSA would have been familiar with the mechanism of operation and design of assays for the detection of viral infections, including HIV-1.” The Defendants have proposed that the person of ordinary skill has the following qualifications: A person with (1) a Ph.D. in chemistry, molecular biology, biochemistry, or a related field; (2) at least two years of experience in a chemistry, molecular biology, or biochemistry laboratory and familiarity with designing assays involving nucleic acid amplification to detect pathogens such as viruses; and (3) knowledge of techniques for nucleic acid amplification, including methods of optimization for sensitivity and specificity. You may adopt bioMérieux’s definition, the Defendants’ definition, or any other definition you believe is supported by the evidence.

When determining the level of ordinary skill in the art, you should consider all the evidence submitted by the parties, including evidence of:

1. the level of education and experience of persons actively working in the field at the time of the invention, including the inventors;

2. the types of problems encountered in the art at the time of the invention; and
 3. the sophistication of the technology in the art at the time of the invention,
- including the rapidity with which innovations were made in the art at the time of the invention.

8.5 OTHER CONSIDERATIONS

Before deciding the issue of obviousness for each claimed invention, you must also consider certain factors, which may help to determine whether or not the invention would have been obvious. No factor alone is dispositive, and you must consider the obviousness or nonobviousness of the invention as a whole. Evidence regarding these other considerations may be the most significant evidence presented on the issue of obviousness. Certain of these factors include:

1. Was there long-felt need for a solution to the problem facing the inventors, which was satisfied by the claimed invention?
2. Did the claimed invention achieve unexpectedly superior results over the closest prior art commensurate with the full scope of the claims?
3. Were products covered by the claim commercially successful due to the merits of the claimed invention rather than due to advertising, promotion, salesmanship, or features of the product other than those found in the claim?
4. Did others in the field, or Defendants, praise the claimed invention or express surprise at the making of the claimed invention?
5. Did others try, but fail, to solve the problem solved by the claimed invention?

Answering all, or some, of these questions “yes” may suggest that the claim was not obvious. These factors are relevant only if there is a connection, or nexus, between the factor and the invention covered by the patent claims. Even if you conclude that some of the above indicators have been established, those factors should be considered along with all the other evidence in the case in determining whether the Defendants have proven by clear and convincing evidence that the claimed invention would have been obvious.

9. DAMAGES

9.1 DAMAGES GENERALLY

If you find that any claim of the '352 patent is valid, you must determine the amount of damages to be awarded to bioMérieux for the infringement. On the other hand, if you find that all of the asserted patent claims are invalid, then you should not consider damages in your deliberations.

The damages you award must be adequate to compensate bioMérieux for infringement. They are not meant to punish the Defendants. Your damages award should put bioMérieux in approximately the same financial position that it would have been in had the infringement not occurred. The damages award cannot be less than a reasonable royalty.

bioMérieux has the burden to establish the amount of the damages by a preponderance of the evidence. bioMérieux must prove the amount of damages with reasonable certainty, but it need not prove the amount with mathematical precision. You may not award damages that are speculative, damages that are only possible, or damages that are based on guesswork.

The fact that I am instructing you on damages does not mean that the Court believes that one party or the other should win in this case. My instructions about damages are for your guidance only in the event you find in favor of Plaintiffs.

9.2 DATE DAMAGES BEGIN AND END

The period over which bioMérieux may recover damages for infringement of the '352 patent is from April 14, 2014 to August 5, 2018.

9.3 REASONABLE ROYALTY

In this case, bioMérieux is seeking damages in the amount of a reasonable royalty.

A royalty is a payment made to a patent holder in exchange for the right to make, use, or sell the claimed invention. That right is called a “license.” A reasonable royalty is the payment for the license that would have resulted from a hypothetical negotiation between the patent owner and the alleged infringer just before the infringement began. In considering this hypothetical negotiation, you should focus on what the expectations of the patent holder and the infringer would have been if they had entered into an agreement at that time, and if they had acted reasonably in the negotiations. You should assume that both parties to the hypothetical negotiation believed the patent to be valid and infringed and that both parties were willing to enter into a license. You should also assume that the patent holder and the infringer would have acted reasonably and would have entered into a license agreement.

Evidence of things that happened after the infringement first began can be considered in evaluating the reasonable royalty only to the extent that the evidence aids in assessing what royalty would have resulted from a hypothetical negotiation.

Having that in mind, you may consider any relevant fact in determining the reasonable royalty for the use of a patented invention, including the opinion testimony of experts. The reasonable royalty you determine must be a royalty that would have resulted from the hypothetical negotiation, and not simply a royalty either party would have preferred. A reasonable royalty is typically made up of a royalty base and a royalty rate that is applied to that base. There may be more than one way to calculate a royalty base and a royalty rate.

Finally, although evidence of the profits an alleged infringer made may be relevant to your determination of the royalty rate, the royalty rate need not be limited to the amount of profits the alleged infringer made.

9.4 REASONABLE ROYALTY MUST BE BASED ON INCREMENTAL VALUE ATTRIBUTABLE TO THE INFRINGING FEATURE

The reasonable royalty award must be apportioned and based only on the incremental value that the patented invention adds to the end product. When infringing products have both patented and unpatented features, measuring this value requires a determination of the value added by the patented features. The ultimate combinations of royalty base and royalty rate must reflect the value attributable to the infringing features of the product, and no more.

9.5 REASONABLE ROYALTY – TIMING

Damages are not based on a hindsight evaluation of what happened, but on what the parties to the hypothetical license negotiations would have agreed upon. Nevertheless, evidence relevant to the negotiation is not necessarily limited to facts that occurred on or before the date of the hypothetical negotiation. You may also consider information the parties would have foreseen or estimated during the hypothetical negotiation, which may under certain circumstances include evidence of usage after infringement started, license agreements entered into by the parties shortly after the date of the hypothetical negotiation, profits earned by the infringer, and non-infringing alternatives.

9.6 REASONABLE ROYALTY – RELEVANT FACTORS TO THE HYPOTHETICAL NEGOTIATION

In determining the amount of a reasonable royalty, you may consider evidence on any of the following factors. This is not every possible factor, but it will give you an idea of the kinds of things to consider in setting a reasonable royalty.

1. Any royalties received by the licensor for the licensing of the '352 patent, proving or tending to prove an established royalty.
2. Royalties paid for other patents comparable to the asserted patents.
3. The nature and scope of the license, as exclusive or non-exclusive, or as restricted or non-restricted in terms of its territory or with respect to whom the manufactured product may be sold.
4. bioMérieux's established policy and marketing program to maintain its right to exclude others from using the patented invention by not licensing others to use the invention, or by granting licenses under special conditions designed to preserve that exclusivity.
5. The commercial relationship between bioMérieux and the Defendants, such as whether or not they are competitors in the same territory in the same line of business.
6. The effect of selling the patented product in promoting sales of other products of the licensee; the existing value of the invention to the licensor as a generator of sales of its non-patented items; and the extent of such collateral sales.
7. The duration of the asserted patents and the term of the license.
8. The established profitability of the product made under the asserted patents; its commercial success; and its current popularity.

9. The utility and advantages of the patented invention over the old modes or devices, if any, that had been used for achieving similar results.

10. The nature of the patented invention; the character of the commercial embodiment of it as owned and produced by the licensor; and the benefits to those who have used the invention.

11. The extent to which the Defendants made use of the invention; and any evidence that shows the value of that use.

12. The portion of the profit or of the selling price that may be customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions.

13. The portion of the profit that arises from the patented invention itself as opposed to profit arising from unpatented features, such as the manufacturing process, business risks, or significant features or improvements added by the accused infringer.

14. The opinion testimony of qualified experts.

15. The amount that a licensor and a licensee would have agreed upon (at the time the infringement began) if both sides had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee—who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention—would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a patentee who was willing to grant a license.

16. Any other economic factor that a normally prudent business person would, under similar circumstances, take into consideration in negotiating the hypothetical license.

No one factor is dispositive, and you can and should consider the evidence that has been presented to you in this case on each of the factors. You may also consider any other factors that in your mind would have increased or decreased the royalty the infringer would have been willing to pay, and the patent holder would have been willing to accept, acting as normally prudent business people.

9.7 REASONABLE ROYALTY – USE OF COMPARABLE LICENSE AGREEMENTS

When determining a reasonable royalty, you may consider evidence concerning the amounts that have been paid for rights to similar technologies. A license agreement need not be perfectly comparable to a hypothetical license that would be negotiated between bioMérieux and the Defendants in order for you to consider it. However, if you choose to rely upon evidence from any other license agreements, you must account for any differences between those licenses and the hypothetically-negotiated license between bioMérieux and the Defendants, in terms of the technologies and economic circumstances of the contracting parties, when you make your reasonable royalty determination. It is not appropriate to derive a reasonable royalty based on other licenses that include rights broader than the patent-in-suit without considering whether any discounting of the licensing fee is necessary to account for amounts paid for other rights.

10. DELIBERATION AND VERDICT

10.1 INTRODUCTION

Now let me finish up by explaining some things about your deliberations in the jury room, and your possible verdicts.

Once you start deliberating, do not talk to the jury officer, to me, or to anyone but each other about the case. If you have any questions or messages, you must write them on a piece of paper, sign them, and give them to the jury officer. The officer will give them to me, and I will respond as soon as I can. I may have to talk to the lawyers about what you have asked, so it may take some time to get back to you. Any questions or messages normally should be sent through your foreperson, who by custom of this Court is juror No. 1.

One more thing about messages. Do not ever write down or tell anyone how you stand on your votes. For example, do not write down or tell anyone that you are split 4-4, or 6-2, or whatever your vote happens to be. Your votes should stay secret until you are finished.

10.2 UNANIMOUS VERDICT

Your verdict must represent the considered judgment of each juror. In order for you as a jury to return a verdict, it is necessary that each juror agree to the verdict. Your verdict must be unanimous.

It is your duty, as jurors, to consult with one another and to deliberate with a view towards reaching an agreement, if you can do so without violence to your individual judgment. Each of you must decide the case for yourself, but do so only after an impartial consideration of the evidence with your fellow jurors. In the course of your deliberations, do not hesitate to re-examine your own views and change your opinions, if convinced they are erroneous. But do not surrender your honest conviction as to the weight or effect of evidence solely because of the opinion of your fellow jurors, or for the purpose of returning a verdict.

Remember at all times that you are not partisans. You are judges—judges of the facts. Your sole interest is to seek the truth from the evidence in the case.

A form of verdict has been prepared for you. I will review it with you in a few moments. You will take the form to the jury room and when you have reached unanimous agreement as to your verdict, you will have your foreperson fill in, date, and sign the form. You will then return to the courtroom and my deputy will read aloud your verdict.

It is proper to add the caution that nothing said in these instructions, and nothing in the form of a verdict, is meant to suggest or convey in any way or manner any intimation as to what verdict I think you should find. What the verdict shall be is your sole and exclusive duty and responsibility.

10.3 DUTY TO DELIBERATE

Now that all the evidence is in and the arguments are completed, you are free to talk about the case in the jury room. In fact, it is your duty to talk with each other about the evidence, and to make every reasonable effort you can to reach unanimous agreement. Talk with each other, listen carefully and respectfully to each other's views, and keep an open mind as you listen to what your fellow jurors have to say. Try your best to work out your differences. Do not hesitate to change your mind if you are convinced that other jurors are right and that your original position was wrong.

But do not ever change your mind just because other jurors see things differently, or just to get the case over with. In the end, your vote must be exactly that—your own vote. It is important for you to reach unanimous agreement, but only if you can do so honestly and in good conscience.

No one will be allowed to hear your discussions in the jury room, and no record will be made of what you say. So you should all feel free to speak your minds. Listen carefully to what the other jurors have to say, and then decide for yourself.

10.4 SOCIAL MEDIA

During your deliberations, you must not communicate with or provide any information to anyone by any means about this case. You may not use any electronic device or media, such as the telephone, a cellphone, smartphone, tablet, computer, the Internet, any Internet service, any text or instant messages service, any Internet chatroom, blog or website such as Facebook, LinkedIn, YouTube, Instagram, Snapchat, or Twitter to communicate to anyone any information about this case or to conduct any research about this case until I accept your verdict.

In other words, you cannot talk to anyone on the phone, correspond with anyone, or electronically communicate with anyone about this case. You can only discuss the case in the jury room with your fellow jurors during deliberations.

10.5 COURT HAS NO OPINION

Let me finish by repeating something I have said to you earlier. Nothing that I have said or done during this trial was meant to influence your decision in any way. You must decide the case yourself based on the evidence presented.